Example IP Agreement-

DEPARTMENT OF ENERGY SOLICITATIONS FOR THE SMALL BUSINESS INNOVATION RESEARCH AND SMALL BUSINESS TECHNOLOGY TRANSFER PROGRAMS GENERAL INFORMATION AND GUIDELINES

1. DESCRIPTION OF PROGRAMS

1.1 INTRODUCTION

This document describes two solicitations under which small businesses are invited to submit grant applications to two separate Department of Energy (DOE) programs: the Small Business Innovation Research (SBIR) program and the Small Business Technology Transfer (STTR) program. These annual solicitations, the twentieth for SBIR and the ninth for STTR, are issued pursuant to the Small Business Innovation Research Program Reauthorization Act of 2000 (Public Law 106-554) and the Small Business Research and Development Act of 1992 (Public Law 102-564). Small businesses with strong research capabilities in science or engineering in any of the topic areas described in the Technical Topics section of this document are encouraged to participate.

The solicitations are presented in a single document because the two programs are very similar. *The major difference is that STTR grants must involve substantial cooperative research collaboration between the small business and a non-profit research institution (defined in Section 2.8)*. However, it should be noted that the SBIR program also permits substantial collaboration between the small business and other organizations, including non-profit research institutions. The difference is that in SBIR, the collaboration is optional, and i*n STTR, the collaboration is required and must be cooperative in nature*.

In the rest of this document, italics will be used to identify information that pertains exclusively to the STTR program.

The objectives of these programs include increasing private sector commercialization of technology developed through DOE-supported R&D, stimulating technological innovation in the private sector, and improving the return on investment from federally funded research for economic and social benefits to the nation. DOE will support high-quality research or research and development (R&D) on advanced concepts concerning important mission-related scientific or engineering problems and opportunities that could lead to significant public benefit if the research is successful.

1.2 THREE-PHASE PROGRAMS

These solicitations are for Phase I grant applications only, but this document describes some aspects of Phase II grants as reference information.

Phase I: Phase I grant awards from these competitions will be made during fiscal year 2002 to small businesses, in amounts up to $100,000. The duration of Phase I will be at least 6 months and no more than 9 months, depending on scheduling constraints. Phase I is to evaluate, insofar as possible, the scientific or technical merit and feasibility of ideas that appear to have commercial potential. The grant application should concentrate on research that will contribute to proving scientific or technical feasibility of the approach or concept. Success in Phase I is a prerequisite to further DOE support in Phase II.

Phase II: Phase II is the principal R&D effort, and only Phase I grantees will be eligible to compete for subsequent Phase II continuation of their Phase I projects. Phase II awards

are expected to be made during fiscal year 2003 to firms with approaches that appear sufficiently promising as a result of the Phase I effort. Phase II grant awards are expected to be in amounts up to $750,000 and to cover a period of up to 24 months. Funds will be allocated over a two-year period. It is anticipated that one-third to one-half of Phase I awardees will receive Phase II awards, depending on Phase I results and availability of funds. Instructions for preparing the Phase II grant application will be provided to all Phase I grantees through a posting on the SBIR/STTR website. The work proposed for Phases I and II, assuming that it proceeds successfully, should be suitable in nature for subsequent progression to Phase III.

Phase III: Under Phase III, it is intended that non-Federal capital be used by the small business to pursue commercial applications of the R&D. That is, the SBIR/STTR funding pays for research or R&D meeting DOE objectives (Phases I and II); private capital provides follow-on developmental funding to meet commercial objectives (Phase III). Also, under Phase III, Federal agencies may award non-SBIR/STTR funded follow-on grants or contracts for (1) products or processes that meet the mission needs of those agencies, or (2) further research or R&D. In some cases, these follow-on grants or contracts could be sole source awards since they represent a continuation of SBIR or STTR projects that were competitively selected in Phases I and II by scientific/technical review criteria.

1.3 PHASE II COST SHARING AND PHASE III FOLLOW-ON FUNDING

An important goal of these programs is the commercialization of DOE-supported research or R&D. Following the start of Phase I, applicants whose research or R&D has identifiable potential to meet market needs are encouraged to seek commitments from private sector or Federal non-SBIR/STTR funding sources for both Phases II and III. (See Evaluation Criterion 3 in Section 4.3.) *The commitments should be obtained prior to the Phase II grant application submission*. The commitment for Phase III may be made contingent on the DOE-supported research or R&D meeting some specific technical objectives in Phase II, which, if met, would justify funding to pursue further development for commercial purposes in Phase III.

1.4 ELIGIBILITY

Only small businesses, as defined in Section 2.3, are eligible to receive SBIR/STTR awards. Joint ventures as defined in Section 2.7 are also permitted, provided the entity created also qualifies as a small business in accordance with the definition in Section 2.3. The research or R&D must be performed in the United States for both Phases I and II. "United States" means the 50 states, the territories and possessions of the United States, the Commonwealth of Puerto Rico, the Trust Territory of the Pacific Islands, and the District of Columbia.

1.5 RESTRICTIONS

1.5.1 Restrictions on Submitting Applications

a. Choice of Topic and Subtopic - Each grant application must be submitted to only one topic and, within it, to only one subtopic as described in the Technical Topics section. DOE will not assign a topic and/or subtopic to grant applications; this must be done by the applicant. When a grant application has relevance to more than one subtopic,

the applicant must decide which subtopic is the most relevant and submit the grant application under that subtopic only.
b. Responsiveness - To be considered responsive, a grant application must fall within the description of the subtopic, and also satisfy any conditions contained in the introductory section of that topic. **The language in both the topic introductions and the subtopics should be taken literally. Applications that do not directly address the subtopic statement will be declined for non-responsiveness, and will not be peer reviewed.**
c. Duplicate Applications - Duplicate grant applications, even if submitted to different topics and/or subtopics, will be rejected without review. The application received first in time will be accepted for evaluation.
d. Multiple Applications - There is no limit on the number of **different** grant applications that a small business may submit, even to the same subtopic.
e. Similar Applications - Similar grant applications in which some of the tasks overlap (e.g., the same technology used for different purposes), may be submitted. However, **no more than one** such similar grant application will be funded as a result of these solicitations.
f. Grant Applications Being Considered for Other Funding - If a grant application submitted in response to these solicitations contains a significant amount of essentially equivalent work as one that has been previously funded by, has been submitted to, or is about to be submitted to, another Federal agency, or to another DOE program, the applicant must so indicate by answering "Y" for yes for Question #4 on the grant application cover page, Appendix A, and by providing the information required by Section 3.3.4. If an award is made pursuant to a grant application submitted under these solicitations, the grantee will be required to certify that neither the grantee organization nor any of its employees have previously been, nor are currently being paid for essentially equivalent work by an agency of the Federal Government.
In the event the same or similar work is selected for funding by two or more agencies, the agencies, in consultation with the applicant, will determine the awarding agency.

1.5.2 Restrictions on the Principal Investigator

The Principal Investigator (PI) is the key individual designated by the applicant to direct the project. The PI must be knowledgeable in all technical aspects of the grant application and be capable of leading the research effort. **Because the DOE's evaluation of the grant application is critically dependent on the qualifications of the PI, changes in the PI that are made after award selection are strongly discouraged. Requests for PI changes will be closely scrutinized and infrequently approved, and may cause delays in grant execution.**
The PI's primary employment must be with the small business at the time of award and during the conduct of the proposed research. Primary employment means that more than one-half of the PI's time, but no less than 20 hours (average) per week, is spent in the employment of the small business during the conduct of the project. **Primary employment with a small business precludes full-time employment with another organization.** However, it is acceptable for the PI to be on an unpaid leave-of-absence from another organization during the conduct of the research project. In addition, the PI is expected to devote to the project a considerable part of his or her time (at least 150 hours

on both SBIR and STTR Phase I projects). Also, the source of the PI's compensation for work on the project must be the small business. In order to ensure appropriate technical guidance for the project, only one PI will be accepted per project; **co-PIs will not be accepted.** Before the grant is awarded, the PI will be required to sign a statement certifying adherence to all these requirements. Sample PI certifications are included at the end of the solicitation for information only. Please do not send these samples with the Phase I application.

1.5.3 Restrictions on the Level of Small Business Participation

For both SBIR and STTR, there are requirements on the amount of the funded research or analytical effort that must be performed by the small business (see also Section 3.3.5.a) in order to be selected for and to receive a grant. The funded research or analytical effort is defined as the total requested funding minus the cost of any purchased or leased equipment, materials, and supplies (whether purchased by the applicant or a subcontractor). Work performed by a consultant, a DOE national laboratory, or any other subcontractor, will be considered as external to the applicant organization when complying with these requirements.

To be awarded an SBIR grant, a minimum of two-thirds of the funded research or analytical effort must be allocated to the small business applicant during Phase I; correspondingly, a maximum of one-third of the effort may be allocated to consultants or subcontractors. (In Phase II, up to one-half of the effort may be allocated to consultants or subcontractors).

To be awarded an STTR grant, at least 40% of the funded research or analytical effort must be allocated to the small business, and at least 30% of the effort must be allocated to the non-profit research institution (as defined in Section 2.8). (The same requirement is applicable for both Phase I and Phase II.)

Grant applications that include a substantial amount of cooperative research collaboration with a non-profit research institution can be considered for funding in both programs, thereby increasing the chances of winning an award. The required dollar amount for the research institution (RI) depends on the amount of material, equipment, and supplies in the budget. However, it is unlikely that STTR requirements can be satisfied unless the subcontract for the RI is at least $15,000. Applicants can indicate their interest in being considered for both programs by checking the appropriate box on the grant application cover page, Appendix A. **If you choose to be considered in both programs, prepare the grant application to meet the requirements of the SBIR program.** It is understood that because some requirements differ for the two programs (e.g., the duration of Phase I, the minimum hours for the PI, and the participation levels described above) some scheduling or budgetary adjustments may be required after the grant application is selected for award. These adjustments will be addressed during the negotiation period before the grant begins.

1.5.4 Restrictions on the Management of SBIR/STTR Projects

The small business, not a subcontractor *(including the research institution in STTR)*, must exercise management direction and control of the performance of the SBIR or STTR funding agreement. Regardless of the proportion of the work or funding of each of the performers under the grant, the small business is the primary grantee with overall responsibility for the grant's performance. It is recommended that all agreements between the small business and any subcontractor *(including the research institution collaborating*

in the STTR project), including any business plan concerning agreements and responsibilities between the parties, or for the commercialization of the resulting technology, reflect the controlling position of the small business during the performance of the Phase I or Phase II grant.

1.6 SUPPORT FROM NATIONAL LABORATORIES, UNIVERSITIES, AND OTHER RESEARCH INSTITUTIONS

1.6.1 Identifying Institutions

Experts at institutions such as DOE contractor-operated national laboratories, universities, colleges, or other research institutions, may be consulted during the preparation of the grant application. Any of these institutions may also serve as a subcontractor to SBIR/STTR Phase I or Phase II projects, providing technical expertise, facilities, or equipment. In such cases, the small business must have the necessary expertise to direct the project.

For STTR, the small business must conduct cooperative R&D with a research institution (see Section 2.8). An alliance between the small business and a research institution must be formed before submitting the grant application. Grants will be awarded to the small business, which will receive all funding for the project and disperse the appropriate funds to the research institution.

A list of National Laboratory Collaboration Opportunities is available on our web page at http://sbir.er.doe.gov/sbir under "Advantages of Collaboration". Inquiries may be made at a local library to locate supporting expertise or facilities from an appropriate university or other research institution to assist with the proposed project. For help in contacting personnel at Department of Energy and other Federal agency laboratories, see the Federal Laboratory Consortium (FLC) Website at http://www.federallabs.org or contact the FLC Locator at:

FLC Locator
Mr. Frank Koos or
Mr. Sam Samuelian
950 N. Kings Highway, Suite 208
Cherry Hill, NJ 08034
Phone: (856) 667-7727
FAX: (856) 667-8009
E-mail: fkoos@utrsmail.com
ssamuelian@utrsmail.com

1.6.2 DOE User Facilities

The Department of Energy operates a number of specialized facilities to enable scientists to carry out experiments that could not be done in the laboratories of individuals. These facilities include synchrotron radiation light sources (Advanced Light Source, National Synchrotron Light Source, Advanced Photon Source, and Stanford Synchrotron Radiation Laboratory), high-flux neutron sources (High Flux Beam Reactor, Intense Pulsed Neutron Source, High Flux Isotope Reactor, and Neutron Scattering Center), electron-beam microcharacterization centers (Center for the Microanalysis of Materials, Electron Microscopy Center, Shared Research Equipment Program, and National Center for Electron Microscopy), particle and ion accelerators (Relativistic Heavy Ion Collider, Continuous Electron Beam Accelerator Facility, Argonne Tandem Linac Accelerator System, Lawrence Berkeley National Lab 88-Inch Cyclotron, Holifield Radioactive Ion

Beam Facility, the Bates Linear Accelerator Center at MIT), and other specialized facilities (Surface Modification & Characterization Research Center, Combustion Research Facility, James R. MacDonald Laboratory, Pulse Radiolysis Laboratory, and Materials Preparation Center).
Potential applicants to the SBIR or STTR programs should consider whether the use of these facilities would contribute to the scientific efforts proposed in Phases I or II. For approved experiments (access to these facilities is through a peer-reviewed system), operating time is available without charge to those scientists whose intent is to publish their results in the open literature. If the investigator wishes to perform proprietary research, the user must pay the full-cost recovery rate for facility usage (in which case, the cost could be charged to the SBIR/STTR project); in return, the facility will treat all technical data generated as proprietary, and the user may take title to any inventions resulting from the research. Additional details on program dedicated user facilities may be found at the following websites:
http://www.er.doe.gov/production/bes/BESfacilities.htm for facilities supported by the Office of Basic Energy Sciences, http://www.sc.doe.gov/production/ober/facilities.html for facilities supported by the Office of Biological and Environmental Sciences.
Information on other laboratory facilities which may be available on a case by case basis may be obtained through the FLC Locator or directly from the DOE laboratory involved.

1.7 AGREEMENTS WITH RESEARCH INSTITUTIONS AND OTHER SUBCONTRACTORS

1.7.1 Property and Commercialization Rights Agreements

It is in the small business's best interest, when collaborating with a research institution or other subcontractor, to negotiate a written agreement for allocating, between the parties, intellectual property rights and rights to carry out any follow-on research, development, or commercialization. *For STTR awards only, the small business and the research institution must certify that this agreement has been completed. This certification will be requested by the Contracts Specialist after award selection, but before the grant is signed.* The model agreement provided at the end of this document may be used or revised through negotiation between the small business and the research institution. The completed agreement should **not** be submitted with the grant application, but retained by the parties to the agreement.
The Federal government will not be a party to any agreement between the small business and any subcontractor, including the STTR research institution. However, applicants are reminded that nothing in such agreements should conflict with any provisions setting forth the respective rights of the United States and the small business with respect to both intellectual property rights and any rights to carry out follow-on research.

1.7.2 Cooperative Research and Development Agreements

SBIR/STTR grant recipients who choose a DOE laboratory as a subcontractor may be required to implement a Cooperative Research and Development Agreement (CRADA). CRADAs are collaborative research agreements between DOE laboratories and their partners, and are approved by the appropriate DOE Operations Office. *In many cases, the CRADA could be used as a vehicle for the property and commercialization rights agreement required by the STTR program (Section 1.7.1).*

Immediately after the applicant small business is notified that it has been chosen for an SBIR/STTR grant award, the company should contact the laboratory to determine if a CRADA will be required. If the DOE laboratory requires a CRADA, no work may be initiated by the laboratory under the grant until the CRADA has been approved. Implementation of a CRADA begins with project definition and milestones, and leads to a statement of work. Standard terms and conditions, with a total of 60 options to provide maximum flexibility, are available from the laboratory for use by partners and laboratories. A streamlined, short-form CRADA document that can reduce the need for legal review is also available.

1.7.3 Work-for-Others Agreements

"Work-for-Others" agreements are used by DOE national laboratories when performing tasks that are less cooperative in nature than tasks that require a CRADA (i.e., the work is directed by the primary contractor rather than being fully collaborative). Nonetheless, it is recommended, even when operating under a work-for-others agreement, that the small business negotiate a written agreement for the disposition of intellectual property that laboratory employees may develop during the course of their work for the grantee.

1.7.4 When to Negotiate these Agreements

It is recommended that small business applicants to the SBIR/STTR programs attempt, to the maximum extent practicable, to negotiate these agreements before submitting the grant application. It is during this period that the small business will have maximum leverage in conducting negotiations. If satisfactory terms cannot be agreed upon at this time, the small business still would have the option of finding an alternative research institution or subcontractor. Once the grant application has been submitted to the DOE, and subsequently reviewed and selected for award, the small business may be locked-in to the subcontractor identified in the grant application. Also, after selection for award, there would only be a short time available for conducting these negotiations before the grant would begin.

1.8 CONTACT WITH DOE

Questions about the DOE SBIR/STTR programs may be addressed to the SBIR/STTR Program Office, SC-32, U.S. Department of Energy, 19901 Germantown Road, Germantown, MD 20874-1290, telephone (301) 903-1414, e-mail: sbir-sttr@science.doe.gov. Requests to be added to the notification list for future DOE SBIR/STTR solicitations should be forwarded to the SBIR/STTR Program office as mentioned above, by calling the DOE SBIR/STTR hotline on (301) 903-5707, or by submitting your request on-line at the SBIR/STTR website: http://sbir.er.doe.gov/sbir.

For reasons of competitive fairness, communications with DOE personnel regarding this solicitation are limited to non-technical matters and to clarifying specific language in the solicitation. Further interpretations of the narrative descriptions of the technical topics will not be provided. However, the staff of DOE national laboratories, universities, or other research institutions may provide assistance, or may even enter into an agreement to participate in a grant application, as described in Section 1.6.

No information on grant application status will be available until the final selections have been made (approximately four months after the closing date of the solicitation). However, if a grant application acknowledgment, with an assigned grant application number, is not received from DOE within three weeks of the closing date, the applicant should telephone (301) 903-1414.

Example IP Agreement-

2. DEFINITIONS

The following definitions apply for purposes of this solicitation:

2.1 RESEARCH OR RESEARCH AND DEVELOPMENT

Research or R&D is any scientific or engineering activity which is (1) a systematic, intensive study directed toward greater knowledge or understanding of the subject; (2) a systematic study directed specifically toward applying new knowledge to meet a recognized need; and/or (3) a systematic application of knowledge toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements.

2.2 INNOVATION

Innovation is the process of introducing new ideas into use, or the process of introducing novel uses of existing ideas.

2.3 SMALL BUSINESS CONCERN

A small business concern is one that at the time of award of Phase I (and of Phase II, if awarded):

a. Is independently owned and operated, has its principal place of business located in the United States (as defined in Section 1.4), and is organized for profit;

b. Is at least 51 percent owned, or in the case of a publicly owned business, has at least 51 percent of its voting stock owned by United States citizens or lawfully admitted permanent resident aliens; and

c. Has, including its affiliates, a number of employees not exceeding 500. Business concerns, other than licensed investment companies or state development companies qualifying under the Small Business Investment Act of 1958, 15 U.S.C., Chapter 14B Small Business Investment Program, Section 661 et seq., are affiliates of one another when either, directly or indirectly, (1) one concern controls or has the power to control the other, or (2) third parties (or party) control or have the power to control both. Control can be exercised through common ownership, common management, and contractual relationship. Business concerns include, but are not limited to, any individual, partnership, corporation, joint venture, association, or cooperative.

2.4 SOCIALLY AND ECONOMICALLY DISADVANTAGED SMALL BUSINESS CONCERN

A socially and economically disadvantaged small business concern is one:

a. that is at least 51 percent owned by (i) an Indian tribe or a native Hawaiian organization, or (ii) one or more socially and economically disadvantaged individuals; and;

b. whose management and daily business operations are controlled by one or more socially and economically disadvantaged individuals. A socially and economically disadvantaged individual is defined as a member of any of the following groups: Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Subcontinent Asian Americans, other groups designated from time to time by the Small Business Administration (SBA) to be socially disadvantaged, or any other individual found to be socially and economically disadvantaged by SBA pursuant to section 8(a) of the Small Business Act, 15 U.S.C. 637(a).

Related information requested in Appendix D, "Application Checklist," is provided to the Small Business Administration for statistical purposes and is not considered in the evaluation of grant applications or award of grants.

2.5 WOMAN-OWNED SMALL BUSINESS CONCERN

A woman-owned small business concern is a small business that is at least 51 percent owned by a woman or women who also control and operate it. "Control" in this context means exercising the power to make policy decisions. "Operate" in this context means being actively involved in the day-to-day management.

Related information requested in Appendix D, "Application Checklist," is provided to the Small Business Administration for statistical purposes and is not considered in the evaluation of grant applications or award of grants.

2.6 SUBCONTRACT

A subcontract is any agreement, other than one involving an employer-employee relationship, entered into by the primary recipient of a Federal Government grant, calling for supplies or services required solely for the performance of the original grant award.

2.7 JOINT VENTURE

A joint venture is an association between two or more firms to participate jointly in a single business enterprise. There must be a community of interests, a sharing of profits and losses, and, for the purposes of this solicitation, the new entity must qualify as a small business concern as defined in Section 2.3. If a joint venture is selected for award, the Contract Specialist from the Contracting Office will request a signed agreement from the parties involved. The agreement must state which company will negotiate the grant and serve as the main point of contact.

2.8 RESEARCH INSTITUTION

A research institution is a U.S. research organization that is:

a. A non-profit research institution as defined in section 4(5) of the Stevenson-Wydler Technology Innovation Act of 1980 (i.e., an organization owned and operated exclusively for scientific or educational purposes, no part of the net earnings of which inures to the benefit of any private shareholders or individual), or

b. A non-profit college or university, or

c. A non-profit medical or surgical hospital, or

d. A **contractor-operated** federally-funded research and development center (FFRDC), as identified by the National Science Foundation in accordance with the government-wide Federal Acquisition Regulations issued in accordance with section 35(c) (1) of the Office of Federal Procurement Policy Act (or any successor legislation thereto). Department of Energy FFRDCs include Ames Laboratory, Argonne National Laboratory, Brookhaven National Laboratory, Fermi National Accelerator Laboratory, Idaho National Engineering Laboratory, Lawrence Berkeley National Laboratory, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, National Renewable Energy Laboratory, Oak Ridge Institute for Science and Education, Oak Ridge National Laboratory, Pacific Northwest Laboratory, Princeton Plasma Physics Laboratory, Sandia National Laboratories, Savannah River Technology Center, Stanford Linear Accelerator Center, and the Thomas Jefferson National Accelerator Facility.

e. A government-owned, government-operated facility, such as the National Energy Technology Laboratory (NETL), is **not** eligible to act as either a partner or subcontractor in DOE SBIR/STTR projects.

3. PREPARATION INSTRUCTIONS AND REQUIREMENTS FOR GRANT APPLICATIONS

3.1 GENERAL REQUIREMENTS

Grant applications, submitted to DOE under SBIR/STTR programs, must provide sufficient information to convince DOE, and members of the research community who review the grant application, that the application is responsive to the topic and subtopic under which it is submitted, that the proposed work represents a sound approach to the investigation of an important scientific or engineering question, and that it is worthy of support under the stated criteria. The grant application should describe self-contained research that will contribute to proving scientific or technical feasibility of the approach or concept. It should be written with the care and thoroughness accorded papers for publication--direct, concise, and informative. Promotional and non-project-related discussion detracts from the professional quality of the proposal. The work proposed for Phase I, assuming that it proceeds successfully, should be suitable in nature for subsequent progression to Phases II and III.

Technical reviewers will base their conclusions only on information contained in the 25 pages of the grant application. Do not assume that reviewers are acquainted with the small business, key individuals, or any theory or experiments referred to, but not described. (This includes material in refereed professional journals--those in which the articles have been subjected to peer review, and material referenced on internet web pages). Relevant journal articles should be summarized in the grant application. Attached videos, CDs, other media, or printed material beyond the 25-page limit, will not be reviewed.

Specifically excluded from this solicitation are grant applications principally for literature surveys, for compilations of the work of others, for technical assessments, or for technical status surveys. If any of these types of tasks are included in the work plan, the grant (if awarded) may be reduced in proportion to that effort. In addition, grant applications primarily for the development of already proven concepts will be declined, because such efforts are considered the responsibility of the private sector.

Narrative descriptions of 45 technical topics are provided in the Technical Topics section. Each technical topic is subdivided into a maximum of 4 subtopics, designated by the letters a, b, c, or d. **A grant application must respond to a specific technical topic and, within it, to only one subtopic, as required in Section 1.5.1.b.** For example, an applicant submitting a grant application to topic 4a may not submit the same grant application to any other topic and subtopic.

3.2 25-PAGE LIMITATION

Grant applications are limited to 25 consecutively numbered pages stapled together, including cover page, project summary page, main text, references, resumes, budget, and any other enclosures or attachments. The checklist (Appendix D) and the budget worksheet (Appendix D backside) are not included in the 25-page limitation. VCR tapes,

CDs, or electronic disks will not be accepted. Grant applications containing more than 25 pages will not be considered for review or award. **The pages must be of standard 8 1/2" x 11" size (21.6 cm x 27.9 cm). For proportionally spaced fonts, the type can be no smaller than 12 point, and for non-proportionally-spaced fonts, the type can be no smaller than 12 characters per inch (elite). Margins are not to be less than 1 inch (2.5 cm).** The listing of multiple Phase II awards, which may be required by Section 3.3.7, is exempted from the 25-page limitation.

3.3 PHASE I GRANT APPLICATION FORMAT

The items listed in this section should be covered fully and in the order set forth. In following this format, applicants should keep in mind that their grant application will be evaluated with respect to the criteria listed in Section 4.2. The application should be written so as to convince the technical reviewers that each of the criteria has been met to a high degree.

3.3.1 Introductory Pages

a. Cover Page - Complete the form identified as Appendix A in the solicitation. Detailed instructions are provided on the back of Appendix A. This is to be the first page on each of the required 6 copies and one original of your grant application. No other cover page is permitted. Please do not use plastic or other heavy material covers or bindings as they slow processing of your application.

Both the topic number and subtopic letter must **be entered in the appropriate spaces** on the cover page. **Failure to identify both the topic and subtopic on the cover page will cause the grant application to be declined without further review.**

Be sure to answer the yes/no question about collaboration with a research institution. For those that check "yes," you must indicate whether the grant application should be considered for SBIR, STTR, or both programs. For grant applications that are to be considered for both SBIR and STTR, refer to Section 1.5.3. for guidance with respect to conforming to the separate requirements for the two programs.

Applicants must provide answers to all six Certifications and Questions. An answer of "Yes" to Certifications 1 through 3 is required. If the DOE learns from any source that any of these certifications were completed fraudulently, appropriate authorities will be notified for possible criminal investigations. Signatures of the Principal Investigator and the Corporate/Business Authorized Representative are mandatory. Also, for those grant applications that have significant collaboration with a research institution (including all grant applications to be considered for STTR), a signature is required from a person authorized to commit the research institution to participate in the project described in the grant application.

b. Project Summary - Complete the project summary form identified as Appendix B, and include it as Page 2 of your application. Since this summary may be made public by DOE, do not include proprietary information on this page. This form should be neat, clean, and typewritten.

The purpose of the technical abstract is to communicate the overall sense of the project, not every step of the work plan. Statements of future applications or benefits belong in the section on Commercial Applications and Other Benefits. **Do not use acronyms,**

abbreviations, first-person references, or any proper names (including the name of the small business), any subcontractors or institutions, or any trade or product name.
The Department notifies members of Congress of awards in their districts. Therefore, please provide, in clear and concise **layman's** terms, a very brief summary of the project (maximum 2 sentences, 50 words), suitable for a possible press release from a Congressional office. **Suggested Format:** First Sentence--State the problem being addressed so that the DOE interest is clear. Second Sentence--State what is being done to address the problem.
3.3.2 Significance and Background Information, and Technical Approach
a. Identification and Significance of the Problem or Opportunity, and Technical Approach - (Begin on page 3 of your grant application.) Define the specific technical problem or opportunity addressed by your application. Provide enough background information so that the importance of the problem/opportunity is clear. Indicate the overall technical approach to the problem/opportunity and the part that the proposed research plays in providing needed results.
b. Anticipated Benefits - Discuss the technical, economic, social, and other benefits to the Nation, if the project is successful and is carried over into Phases II and III. Identify specific groups in the commercial sector or the Federal government that would benefit from the projected results. Describe the resultant product or process, the likelihood that it could lead to a marketable product, and the significance of the market.

3.3.3 The Phase I Project
a. Technical Objectives - State the specific technical objectives of the Phase I effort, including the questions it will try to answer to determine the feasibility of the proposed approach.
b. Phase I Work Plan - Provide an explicit, detailed description of the Phase I research approach and work to be performed. Indicate what will be done, by whom (small business, subcontractors, or consultants), where it will be done, and how the work will be carried out. The Phase I effort should attempt to determine the technical feasibility of the proposed concept which, if successful, would provide a firm basis for the Phase II grant application. Link the work plan to the objectives of the proposed project. Discuss the methods planned to achieve each objective or task explicitly and in detail. **This section should be a substantial portion of the total grant application.**
Phase I Performance Schedule - Briefly describe the important milestones and the estimated percentage of time for completing each task described in the work plan.
c. Related Research or R&D - Demonstrate know-ledge of key recent work conducted by others in the specific area of the proposed project. If not already addressed in Sections 3.3.2.a, or 3.3.3.b, describe significant research that is directly related to the grant application, including any conducted by the Principal Investigator or by the applicant organization. Describe how it relates to the proposed effort and any planned coordination with outside sources.
d. Principal Investigator and other Key Personnel - The Principal Investigator (PI) must be knowledgeable in all technical aspects of the grant application and be capable of leading the research effort. A resume of the PI, including a list of publications (if any), must be included. It is important that the requirements described in Section 1.5.2

concerning the PI be met explicitly. Also identify other key senior personnel involved in the Phase I effort including information on directly related education and experience. List relevant publications by key personnel.

e. Facilities/Equipment - Describe available equipment and physical facilities necessary to carry out the Phase I effort. Equipment is defined as an article of tangible, nonexpendable, personal property, including exempt property, charged directly to the award, having a useful life of more than one year, and an acquisition cost of $5000 or more per unit. Items of equipment to be leased or purchased must be described and justified in this section. Title to equipment purchased with SBIR/STTR funds may be vested with the grantee at DOE's option. Awardees wishing to obtain title should contact their Contract Specialist for the procedure to follow.

If the equipment, instrumentation, and facilities are not the property of the applicant and are not to be purchased or leased, **the source must be identified and their availability and expected costs specifically confirmed in this section**. A principal of the organization that owns or operates the facilities / equipment must certify regarding the availability and cost of facilities/equipment and any associated technician cost; a copy of this certification must be submitted as part of the grant application. To the extent possible in keeping with the overall purposes of the program, only American-made equipment and products should be purchased with financial assistance provided under both Phase I and Phase II awards.

f. Consultants and Subcontractors

(i) Research Institution -- If the grant application contains substantial collaboration with a research institution *(required for STTR)*, (1) identify the research institution and (2) describe in detail the work to be done by this institution in the Work Plan section. The research institution will be a subcontractor to the small business applicant. A research institution official's signature on the cover page commits the institution to participate in the project as described in the grant application.

(ii) Other Consultants and Subcontractors -- Involvement of consultants or subcontractors in the planning and research stages of the project is permitted provided the work is performed in the United States and subject to the limitations in Section 3.3.5.a. If consultants and/or subcontractors are to be used, this section must identify them and should reference "Letters of Commitment" provided to the applicant by the consultants and/or subcontractors and submitted as part of the application. The letters must provide the proposed costs for the consultant or subcontractor, as well as a specific statement certifying that they have agreed to serve in the manner and to the extent described in the Work Plan section of the grant application. Each letter must be signed by the consultant him/herself, or, for a subcontractor, by an individual authorized to represent the subcontractor. Note: Consultants are not employees of either the small business or any subcontractor.

3.3.4 Similar Grant Applications, Proposals, or Awards

While it is permissible, with notification in the proposal or grant application, to submit identical proposals or proposals containing a significant amount of essentially equivalent work to more than one federal agency, it is unlawful to enter into contracts or grants in which essentially equivalent efforts are performed. If a grant application contains work that has been previously funded, or is either funded, pending, or about to be submitted to

another Federal agency or to the DOE in a separate action, the applicant must provide the following information in the grant application:

- The name and address of the agency(s) to which a proposal or grant application was submitted, or will be submitted, or from which an award is expected or has been received.
- The date of submission or the date of award.
- The title of the grant application.
- The name and title of the project manager or Principal Investigator for each proposal or grant application submitted or award received.
- The number and date of the solicitation under which the application or award was received.
- The title of the specific research topic to which the application or award was submitted.

In the event that a proposal or grant application is selected for award by more than one agency, a negotiation will be conducted among the parties to avoid duplication of effort.

3.3.5 Budget

Complete the Grant Application Budget form, Appendix C, for the Phase I effort only. Incorporate the copy of the budget form that bears the original signature into the copy of the grant application that bears the original signatures on the cover page. The budget form should be the last page of the grant application. No other budget form is permitted. A sample budget page is provided along with Appendix C.

a. Under SBIR Phase I, a minimum of two-thirds of the funded research or analytical effort must be performed by the proposing firm. (In Phase II, the minimum is one-half.) ***For STTR, Phases I and II, a minimum of 40% of the funded research or analytical effort must be performed by the small business, and at least 30% of the work must be performed by the research institution.*** The funded research or analytical effort is defined as the total requested funding minus the cost of any purchased or leased equipment, materials, and supplies (whether purchased by the applicant, the research institution, or any other subcontractor). For grant applications that are to be considered for both SBIR and STTR, refer to Section 1.5.3. for guidance with respect to conforming to the separate requirements for the two programs. A worksheet is provided on the reverse side of the Checklist (Appendix D) to assist in calculating the percent of the funded research and analytical effort allocated to each participant. **This worksheet must be completed and submitted with the grant application**. A completed example is also provided, following Appendix D. Applicants are encouraged to contact the SBIR/STTR office if there are questions about this worksheet (301-903-0569).

b. Although there is no absolute cap on indirect costs, grant applications will be evaluated for overall economy and value to DOE.

c. All key small business personnel participating in the Phase I project must be identified in Section A of the budget form. None of the small business personnel can also be consultants or employees of a subcontractor.

d. The principal investigator must spend a minimum of 150 hours *(195 hours for STTR)* on the project (see Section 1.5.2).

e. Use Section B of the budget form to identify consultants. Consultants are not employees of either the small business or any subcontractor (*including the research*

institution for STTR). Consultant costs are not considered part of the small business's research or analytical effort (Section 3.3.5a).
f. Equipment budgets may be included under Phase I (and Phase II). Equipment to be leased or purchased by the small business should be listed in sections C and D and will be carefully reviewed relative to need and appropriateness for the research or R&D proposed. Equipment is defined as an article of tangible, nonexpendable, personal property, including exempt property, charged directly to the award, having a useful life of more than one year and an acquisition cost of $5000 per unit or more.
g. Travel funds, line E, must be justified and related t**o the needs of the project.** Travel expenses for technical conferences are not permitted unless the purpose of attending the conference directly relates to the project (e.g., to present results of the project). **Foreign travel is not an appropriate expense**.
h. In Section F, include only items which are to be acquired from outside the small business. Identify the research institution, if any, on line F5 and any other subcontractors on line F6. On line F6, identify separately the amount of subcontract work to be performed by each subcontractor. A detailed budget for each subcontract should be described on a separate "Budget Explanation Page." In particular, the amount of any equipment, materials, and supplies to be purchased or leased by each subcontractor must be identified on the Budget Explanation page.
i. Phase I (and Phase II) grants may include a profit or fee for the small business, and this amount should appear on line J.
j. **If the total cost of the project (Line I plus Line J) exceeds the amount requested, the grant application must contain information on who will contribute the difference.** This difference should be reported on Line K as cost sharing. Line L (amount of request) must match the amount requested on the cover page, and cannot exceed $100,000. Note that any cost share must be an allowable cost (see Section 3.3.5.l).
k. Tuition costs are not acceptable costs and should not be included in the budget.
l. The government will pay only allowable costs. These are available from the World Wide Web at site http://www.arnet.gov/far/loadmain.html or a copy may be purchased from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7954. Telephone: 202-512-1800. Fax: 202-512-2250. Supporting information for proposed costs may be requested by the contracting office to negotiate the grant.
Note: if your application is accepted for award, the contracting office may need additional supporting information. That office will provide you with specific instructions regarding the information to be submitted.

3.3.6 Certifications

If selected for an award, applicants may be requested to sign and submit one or more of the following certifications directly to the DOE Contract Specialist **during award negotiation.**

a. Principal Investigator Certification
b. Assurance of Compliance
c. Lobbying, Debarment, Suspension, and Other Responsibility Matters and Drug Free Workplace Requirements
d. Property and Commercialization Rights Agreement

For your information and convenience, samples of these certifications are included in the Certifications Section at the end of this solicitation. **Do not include them with the application**.

3.3.7 Addendum: Documentation of Multiple SBIR Phase II Awards

Public Law 102-564 requires that a small business that submits an SBIR Phase I grant application and has received more than 15 Phase II SBIR awards, as totaled from all Federal agencies with SBIR programs, during the preceding five fiscal years, must document the extent to which it was able to secure Phase III funding to develop concepts resulting from previous Phase II awards. Accordingly, such small business concerns shall submit, for each SBIR Phase II award, the name of the awarding agency, the date of the award, the funding agreement number, the funding amount, the topic or subtopic title, the amount of follow-on funding, the source and the date that the follow on funding was provided, and the current commercialization status. **This required information will not be counted toward the grant application limitation of 25 pages**, and should be prepared on a separate page with the heading "Addendum--Phase II History." **Only one copy is necessary**, and it should be attached to the original application.

3.3.8 Checklist and Statistical Information

Complete both sides of the Checklist in Appendix D and submit one copy with the grant application. **The Checklist will not be counted in the 25-page limitation of the grant application**. Read this checklist carefully to assure that a submission is not declined for administrative or budgetary reasons which could have been prevented. The reverse side of the Checklist is to assist the applicant in complying with the level of effort requirements discussed in Section 3.3.5.a.

Be sure to complete the statistical information at the bottom of the Checklist form (Appendix D). This information is required by the Small Business Administration for statistical purposes, will not be revealed to the reviewers, **and will play no role in the grant application award process**.

4. METHOD OF SELECTION AND EVALUATION CRITERIA

4.1 INTRODUCTION

Phase I grant applications will be judged on a competitive basis in several stages. All will be screened initially by DOE to ensure that they (1) meet stated solicitation requirements, (2) are responsive to the topic and subtopic entered on the cover page (see definition of responsiveness in Section 1.5.1), (3) contain sufficient information for a meaningful technical review, (4) are for research or for research and development, and (5) do not duplicate other previous or current work. Grant applications which fail to pass the initial screening will be declined without further review.

Grant applications found to be in compliance with those requirements will be evaluated technically by scientists or engineers to determine the most promising technical and scientific approaches. Each grant application will be judged competitively against the Phase I evaluation criteria (see Section 4.2) on its own merit. Final decisions will be made by DOE based on the evaluation criteria and consideration of other factors, such as program balance and needs.

Example IP Agreement-

4.2 EVALUATION AND SELECTION CRITERIA PHASE I

DOE plans to select awards from those grant applications judged to have the highest overall merit within their technical subject area, with approximately equal consideration given to each of the following criteria:

1. Strength of the Scientific/Technical Approach as evidenced by (1) the innovativeness of the idea and the approach, (2) the significance of the scientific or technical challenge, and (3) the thoroughness of the presentation.

2. Ability to Carry out the Project in a Cost Effective Manner as evidenced by (1) the qualifications of the Principal Investigator, other key staff, and consultants, if any, and the level of adequacy of equipment and facilities; (2) the soundness and level of adequacy of the work plan to show progress toward proving the feasibility of the concept; and (3) the degree to which the DOE investment in the project would be justified by the level of proposed research effort.

3. Impact as evidenced by (1) the significance of the technical and/or economic benefits of the proposed work, if successful, (2) the likelihood that the proposed work could lead to a marketable product or process, and (3) the likelihood that the project could attract further development funding after the SBIR or STTR project ends.

The DOE will not fund any grant application for which there is a reservation with respect to any of the three evaluation criteria, as determined by the review process. In addition, because the DOE supports only high quality research and development, grant applications will be considered candidates for funding only if they receive strong endorsements with respect to at least two of the three criteria. From those grant applications considered candidates for funding, each of the participating DOE program areas will select up to a pre-determined number for funding. (The pre-determined number is proportional to a program area's contribution to the SBIR/STTR programs.) Therefore, grant applications are largely in competition with other grant applications submitted to technical topics from the same DOE technical program area.

4.3 EVALUATION CRITERIA PHASE II

Detailed instructions regarding Phase II grant application submission will be provided by DOE to all Phase I awardees. A Phase II grant application can be submitted only by a DOE Phase I awardee. It must contain enough information on progress accomplished under Phase I by the time of Phase II grant application submission to evaluate the project's promise if continued into Phase II. The Phase II grant application will be evaluated based on the equally weighted criteria below.

1. Strength of the Scientific/Technical Approach as evidenced by (1) the strength and innovativeness of the overall idea and approach for the combined Phase I/Phase II project, (2) the significance of the scientific or technical challenge, and (3) the thoroughness of the presentation.

2. Ability to Carry Out the Project in a Cost Effective Manner as evidenced by (1) the qualifications of the Principal Investigator, other key staff, consultants, if any, and the level of adequacy of equipment and facilities; (2) the soundness and level of adequacy of the work plan to meet the problem or opportunity; (3) with regard to the Phase I objectives, the degree to which Phase I has proven feasibility of the concepts; and (4) the degree to which the DOE investment in the project would be justified by the level of proposed research effort.

Example IP Agreement-

3. Impact as evidenced by (1) the significance of the technical and/or economic benefits of the proposed work, if successful, (2) the likelihood that the proposed work could lead to a marketable product or process, and (3) the likelihood that the project could attract further development funding after the SBIR or STTR project ends. The following evidence of commercial potential will also be considered: (a) the small business concern's record of commercializing SBIR, STTR, or other research, (b) Phase II funding commitments from private sector or non-SBIR/STTR Federal funding sources, and (c) Phase III follow-on funding commitments for the subject of the research.
Phase II grant applications will be subject to a technical review process similar to Phase I. Grant applications will be judged against Phase II criteria on a competitive basis. Final decisions will be made by DOE based on the evaluation criteria and consideration of program balance and needs.
The Phase II funding commitment described above should be an additional 20 percent or more of the Phase II funding requested from the DOE in order to receive full credit. Smaller commitments will receive partial credit. The commitment must be provided either to or by the small business during the Phase II project period. Contributions from international companies are allowed for Phase II non-SBIR/STTR follow-on funding contributions. In-kind contributions are acceptable provided the commitment is in writing, signed by a responsible official, and includes a dollar estimate of its value.
The Phase III follow-on funding commitment must provide that a specific amount of funds (at least one-half of that amount requested from DOE for Phase II) will be made available to or by the small business. Smaller commitments will receive partial credit. The commitment must be **signed** by a person with the authority to make it, indicate the **dates** the funds will be made available, and contain specific **technical objectives** which, if achieved in Phase II, will make the commitment exercisable by the applicant. The terms cannot be contingent on obtaining a patent because of the length of time that process requires. Commitments by private sector firms to purchase items developed under Phase II are acceptable provided the commitment is in writing, signed by responsible official, and includes a dollar estimate of its value.

5. CONSIDERATIONS

5.1 AWARDS

SBIR and STTR awards are subject to the availability of funds and this solicitation does not obligate DOE to make any awards under either Phase I or Phase II. For those grant applications chosen for awards, recipients may incur pre-award costs up to ninety days prior to the effective date of the award, but any pre-award expenditures are made at the recipient's risk. Approval of pre-award costs by the Contract Specialist or incurrence by the recipient does not impose any obligation on DOE if an award is not subsequently made, or if an award is made for a lesser amount than the recipient expected.
Phase I -- From this solicitation, DOE expects to award approximately 215, fixed obligation Phase I research grants ranging up to $100,000 to small businesses in fiscal year 2002. Selections of awards will be completed approximately four months after the closing date of the solicitation. At that time, DOE will notify all applicants of the results and announce the names of those firms receiving awards. Grants are expected to begin about July 22, 2002. The duration of Phase I will be at least 6 months and no more than 9 months, depending on scheduling constraints.

Phase II -- It is anticipated that one-third to one-half of the Phase I awardees will receive Phase II awards, depending on the results of the Phase I effort and the availability of funds. SBIR Phase I awardees may request up to $750,000 for Phase II *($500,000 is the nominal limit for STTR for Phase II)*. The period of performance under Phase II will depend on the scope of the effort, but normally will not exceed 24 months.
Successful Phase II applicants will be issued a grant amendment covering a four-month interim period of performance while the Phase II effort is being negotiated. Should the two parties fail to agree on terms covering the Phase II effort, allowable costs incurred during the four-month interim period will be paid in accordance with Federal and DOE commercial cost principles. (See FAR, Part 31, at http://www.gsa.gov/far/90-46/html/31PART.HTM, and DEAR, Subpart 931, at http://www.pr.doe.gov/dear.html.)

5.2 REPORTS AND PAYMENTS

Final Reports -- Three copies of a final technical report on the project must be submitted to DOE within 90 days after the performance of the effort ends. Therefore, the final report is due:

- 90 days after the Phase I project period ends if a Phase II application was not submitted; or
- 90 days after notification of non-selection for a Phase II award if a Phase II application was submitted; or
- 90 days after the Phase II project period ends.

One copy should be sent to the DOE Technical Project Manager and two copies to the Contract Specialist of the Contracting Office which negotiated the grant The final report should include a single-page project summary as the first page (use Appendix B form or a similar format) identifying the purpose of the research, a brief description of the research carried out, the research findings, and the commercial applications and other benefits of the research in a final paragraph. DOE may publish the summary so it must not contain proprietary information. The remainder of the report should indicate in detail the project objectives, work carried out, results obtained, and estimates of technical feasibility. The Final Technical Report shall be marked in accordance with the clause entitled "Rights in Data - SBIR/STTR Program" of the grant.
Payment Procedures -- Details of payment procedures will be provided by the DOE Contract Specialist if a grant is issued. Fixed-obligation grants will be issued for Phase I awards. Incremental funding over a 24-month period will be used with Phase II grants.
Do not send invoices to the DOE Headquarters SBIR/STTR program; use the address provided by the Contract Specialist.

5.3 RESEARCH INVOLVING SPECIAL CONSIDERATIONS

If the proposed research involves human subjects or vertebrate animals, the following regulations will apply:
a. Human Subjects -- Guidelines to be used in safeguarding the rights and welfare of human subjects used in research supported by the Department of Energy are contained in Ch. 10, Part 745 of the Code of Federal Regulations (CFR) available on the internet at http://www.access.gpo.gov/nara/cfr/waisidx/10cfr745.html.
b. Animal Welfare -- Research work funded by the Department of Energy must be in compliance with the Animal Welfare Act of 1966, as amended (7 U.S.C. 2131 et seq), (9 CFR Part 1, 2, and 3).

Example IP Agreement-

If the proposed scientific research involves human subjects or vertebrate animals, attach a note to that effect to the Checklist, (Appendix D). (The note will not count in the page limit.) If the grant application is selected for award, the SBIR/STTR office will provide information regarding additional approvals which must be obtained prior to award.

5.4 INTELLECTUAL PROPERTY INCLUDING INNOVATIONS, INVENTIONS, AND PATENTS

a. Proprietary Information. Information contained in unsuccessful grant applications will remain the property of the applicant. The Government will retain one file copy of each unsuccessful grant application and destroy the remainder. Public release of information in any grant application submitted will be subject to existing statutory and regulatory requirements, such as the Freedom of Information Act.

If proprietary information is provided in a grant application that constitutes proprietary technical data, confidential personnel information, or proprietary commercial or financial information, it will be treated in confidence, to the extent permitted by law, provided this information is clearly marked by the applicant with the term "Confidential Proprietary Information" and provided appropriate page numbers are inserted into the Proprietary Notice legend printed at the bottom of the cover page (Appendix A). The Government will limit dissemination of such information to official channels. Any other legend may be unacceptable to the Government and may constitute grounds for removing the grant application from further consideration and without assuming any liability for inadvertent disclosure.

b. Protection of Grant Application Information. DOE's policy is to use data included in grant applications for evaluation purposes only and to protect such information from unauthorized use or disclosure.

In addition to government personnel, scientists and engineers from outside the Government may be used in the grant application evaluation process. The decision to obtain outside evaluation will take into consideration requirements for the avoidance of organizational conflicts of interest and the competitive relationship, if any, between the applicant and the prospective outside evaluator. The evaluation will be performed under an agreement with the evaluator that the information contained in the grant application will be used only for evaluation purposes and will not be further disclosed.

c. Rights in Data Developed Under SBIR/STTR Funding Agreements. Rights in technical data, including software developed under the terms of any funding agreement resulting from grant applications submitted in response to this solicitation, shall remain with the grantee, except that the Government shall have the limited right to use such data for Government purposes and shall not release such proprietary data outside the Government without permission of the grantee for a period of not less than four years from completion of the project from which the data were generated. However, effective at the conclusion of the four-year period, the Government shall retain a royalty-free license for Government use of any technical data delivered under an SBIR/STTR award whether patented or not and shall be relieved of all disclosure prohibitions.

d. Copyrights. With prior written permission of the Contract Specialist, the awardee may copyright and publish (consistent with appropriate national security considerations, if any) material developed with DOE support. DOE receives a royalty-free license for the Federal Government and requires that each publication contain an appropriate acknowledgment and disclaimer statement.

e. Patents. Small businesses may retain the principal worldwide patent rights to any invention developed with Federal support. The Government receives a royalty-free license for Federal use, reserves the right to require the patent holder to license others in certain circumstances, and requires that anyone exclusively licensed to sell must normally manufacture it domestically. Information regarding patent rights in inventions supported by Federal funding can be found in the Code of Federal Regulations, 37 CFR Part 401.
f. Distribution of Intellectual Property and Commercialization Rights Between the Small Business and Subcontractor. When using subcontractors, including research institutions, the small business is responsible for protecting its own interests with regard to the retention of intellectual property and commercialization rights. The negotiation of written agreements for assigning these rights is recommended and discussed in Section 1.7.

5.5 NONDISCRIMINATION IN FEDERALLY ASSISTED PROGRAMS

In accordance with Title VI of the Civil Rights Act of 1964, P.L. 88-352, the applicant organization responding to this solicitation must agree to ensure that no person in the United States shall, on the grounds of race, color, national origin, sex, age, or handicap, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity in which the applicant receives Federal assistance from the Department of Energy.

5.6 GRANTEE COMMITMENTS

On award of a grant, the grantee will be required to make certain legal commitments through acceptance of numerous provisions in the Phase I grant. The outline that follows is illustrative of the provisions that will be included in the Phase I grant. This is not a complete list of provisions to be included nor does it contain specific wording of these clauses.
a. Standards of Work. Work performed under the grant must conform to high professional standards.
b. Inspection. Work performed under the grant is subject to Government inspection and evaluation at all reasonable times.
c. Examination of Records. The U.S. Comptroller General (or a duly authorized representative) shall have the right to any directly pertinent records of the grantee involving transactions related to this grant.
d. Default. The government may terminate the grant if the grantee materially fails to comply with the terms and conditions of award.
e. Termination. The grant may be terminated in whole or in part at any time by the government, with consent of the grantee; or by the grantee, upon written notification to DOE setting forth the reasons.
f. Disputes. Any dispute concerning the grant which cannot be resolved by agreement shall be decided by the Grants Specialist with right of appeal.
g. Grant Work Hours. The grantee may not require an employee to work more than eight hours a day or forty hours a week unless the employee is compensated accordingly (e.g., overtime pay).
h. Equal Opportunity. The grantee will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin.

i. Affirmative Action for Veterans. The grantee will not discriminate against any employee or applicant for employment because he or she is a disabled veteran.
j. Affirmative Action for Handicapped. The grantee will not discriminate against any employee or applicant for employment because he or she is physically or mentally handicapped.
k. Officials Not to Benefit. No government official shall benefit personally from the grant.
l. Covenant Against Contingent Fees. No person or agency has been employed to solicit or secure the grant upon an understanding for compensation except bona fide employees or commercial agencies maintained by the grantee for the purpose of securing business.
m. Gratuities. The Government may terminate the grant if any gratuity has been offered to any representative of the Government to secure the grant.
n. Patent Infringement. The grantee shall report each notice or claim of patent infringement based on the performance of the grant.

5.7 ADDITIONAL INFORMATION

a. This solicitation is intended for informational purposes and reflects current planning. If there is any inconsistency between the information contained herein and the terms of any resulting SBIR or STTR award, the terms of the award shall control.
b. Before issuing an SBIR or STTR award, the Government may request the applicant to submit certain organizational, management, personnel, and financial information to assure responsibility of the applicant.
c. Unsolicited grant applications will not be accepted under SBIR/STTR programs in either Phase I or Phase II.
d. If a written request for a debriefing is received by the SBIR/STTR Program Manager **within 30 days after the announcement of the final selections,** the small business will be provided with written information pertinent to DOE's evaluation of the grant application. The identity of reviewers or their affiliation will not be disclosed. Specific scores will not be provided.
e. Any submission incorporating data affecting the national security will not be accepted for evaluation.

6. SUBMISSION OF GRANT APPLICATIONS

6.1 NUMBER OF COPIES

The following must be submitted:

- Original application, which includes:
  a. Cover Sheet (Appendix A),
  b. Project Summary (Appendix B),
  c. Main Text as required in Section 3.3,
  d. Budget Form (Appendix C),
  Note: Signatures are required on the Cover Page and the Budget Form.
- 6 additional copies of the application
- 4 additional copies of the Project Summary (Appendix B)
- 1 completed Checklist and Statistical Information form (Appendix D)
- 1 addendum, "Documentation of Multiple Phase II Awards" (if appropriate)
- 1 Level of Effort Worksheet (reverse side of App. D)

Example IP Agreement-

Grant applications must be addressed to:
SBIR/STTR PROGRAM MANAGER (SC-32)
U.S. DEPARTMENT OF ENERGY
19901 GERMANTOWN ROAD
GERMANTOWN, MD 20874-1290

Phase I grant applications hand carried by the applicant may be delivered to the above mentioned address only. Due to increased and changing building security procedures, applicants who plan to hand carry their grant applications to the DOE Germantown address are advised to call (301) 903-1414 several days ahead to obtain specific delivery instructions. Applications **will not** be accepted by the Department at its Independence Avenue SW, Washington, D.C. address. If a grant application acknowledgement letter with the grant application number endorsed on it is not received from DOE within three weeks following the closing date of this solicitation, the applicant should telephone the SBIR/STTR Program Office promptly at (301) 903-1414.

6.2 DEADLINE FOR RECEIPT OF GRANT APPLICATIONS

a. Any grant application received after 5:00 p.m. EST on Tuesday, January 15, 2002, will be considered late unless it was sent by the U.S. Postal Service's registered or certified mail not later than January 8, 2002. Since the postmark will be the evidence on which the decision is made, it is incumbent on applicants to assure themselves that the postmark is clear and easily legible; hand cancellation is suggested. **Late grant applications will not be eligible for award and will be declined without a review.** Experience has shown that Two-Day Priority Mail and overnight express couriers do not always meet the deadline. Please plan accordingly. The Department takes no responsibility for applications arriving after 5:00 p.m. EST, January 15, 2002. Applications submitted by telefax or e-mail **will not** be accepted.

b. Modifications to grant applications that are intended to be incorporated into the review/award process will be accepted i**f received by the deadline**, and are clearly marked as modifications.

c. Grant applications may be withdrawn by a written notice received at any time prior to award. The DOE will retain one file copy.

6.3 PHYSICAL PACKAGING

Do not use special bindings or covers. This will delay processing of your application while they are removed. Staple the pages in the upper left hand corner of each grant application. Secure packaging is mandatory. The Department will not be responsible for the processing of grant applications damaged in transit.

7. SCIENTIFIC AND TECHNICAL INFORMATION SOURCES

Applicants may want to obtain scientific and technical information related to their proposed effort as background or for other purposes. Sources of this information are listed in the bibliographies of each technical topic.

7.1 NATIONAL TECHNICAL INFORMATION SERVICE

Reports resulting from Federal research and those received from exchange agreements with foreign countries and international agencies are available to the public in both paper

copy and microfiche through the National Technical Information Service (NTIS). They may be ordered electronically from http://www.ntis.gov or by telephone for dispatch through regular mail for a nominal fee from:

NTIS
U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161
1 (800) 553-6847

Rush service (dispatched within 24 hours by an overnight courier) is available for an additional cost.
Alternatively, microfiche of unclassified, unlimited DOE reports is available for use by the public free of charge in Government Printing Office depository collections. More than 1,400 public, college, and university libraries around the country are designated as U.S. Depository Libraries. Check with a local public library. Most libraries participate in an inter-library loan service whereby one may request copies of an unavailable publication from another library.

7.2 DOE OFFICE OF SCIENTIFIC AND TECHNICAL INFORMATION

The Office of Scientific and Technical Information (OSTI) coordinates the Department of Energy's Technical Information Management Program. OSTI collects, preserves, and disseminates scientific and technical information resulting from DOE's research and development activities. It makes worldwide scientific and technical information available to DOE's customers and the general public. Potential SBIR applicants can obtain information from the following OSTI sources:
(1) DOE Information Bridge, a searchable web-based tool with 30,000 full-text DOE R&D reports (see Web site http://www.osti.gov/bridge). Note: Current DOE contractors and grantees wishing to obtain access should call OSTI at 423-576-8401 or 423-576-0487, or E-mail informationbridge@adonis.osti.gov.
(2) R&D Project Summaries, a web-based system describing each of 15,000 DOE R&D projects (see Web site http://www.osti.gov/rdprojects).
(3) EnergyFiles Virtual Library Environment, a digital library of over 400 energy-related databases and other information resources (see Web site http://www.osti.gov/EnergyFiles).
(4) PubSCIENCE, allows the user to search abstracts and citations of multiple publishers at no cost. Once the user has found an interesting abstract, a hyperlink provides access to the publisher's server to obtain the full text article. The article will come up immediately if the user or his/her organization has a subscription to the journal. If the user lacks such a subscription, access to the full text can be obtained by pay per view, by special arrangement with the publisher, library access or through commercial providers. PubSCIENCE is available for public use through the Government Printing Office's "GPO ACCESS". It can be accessed at http://pubsci.osti.gov or http://www.access.gpo.gov/su.docs.

7.3 OTHER SOURCES

Example IP Agreement-

Literature and database searches for abstracts, publications, patents, lists of Federal research in progress (the FEDRIP database), and names of potential consultants in the specific research area can be obtained at good technical libraries (especially those of universities), and from some state organizations.

Example IP Agreement-